

WHAT IS CLAIMED IS:

1. A DNA molecule comprising at least 163 consecutive nucleotide base pairs of the 3' terminal region beginning at the 3' terminal base pair, and at least 125 consecutive nucleotide base pairs of the 5' terminal region beginning at the 5' terminal base pair of the *piggyback* molecule, said region extending from the restriction site *SacI* to the end of the *piggyback* molecule.
2. The DNA molecule of claim 1 comprising at least 276 consecutive nucleotide base pairs of the 3' terminal region beginning at the 3' terminal base pair, and at least 172 consecutive nucleotide base pairs of the 5' terminal region beginning at the 5' terminal base pair.
3. The DNA molecule of claim 1, further defined as having a configuration of an internal repeat, a spacer, and a terminal repeat.
4. The DNA molecule of claim 3, wherein said spacer comprises at least 31 base pairs.
5. The DNA molecule of claim 3, wherein said spacer comprises at least 55 base pairs.
6. The DNA molecule of claim 2, further defined as having a configuration of an internal repeat, a spacer, and a terminal repeat.
7. The DNA molecule of claim 6, wherein said spacer comprises at least 31 base pairs.
8. The DNA molecule of claim 6, wherein said spacer comprises at least 55 base pairs.
9. A genetic cartridge designated ITR.
10. A genetic cartridge designated ITR1.1k.
11. A vector designated pXL-Bac as shown in FIG. 3.

12. A vector designated pXL-BacII-ECFP as shown in FIG. 24.
13. A vector designated pBSII-ITR1.1k-ECFP as shown in FIG. 24.
14. A method of constructing a mobilized and operational transposable *piggyback* vector, said method comprising:
 - (a) inserting a DNA molecule according to claim 1 into a recipient plasmid; and
 - (b) converting the recipient plasmid into an operational transposable sequence by means of a *piggyback* transposon gene or a protein.
15. A method of constructing a mobilized and operational transposable *piggyback* vector, said method comprising:
 - (a) inserting a DNA molecule according to claim 2 into a recipient plasmid; and
 - (b) converting the recipient plasmid into an operational transposable sequence by means of a *piggyback* transposon gene or a protein.
16. A method of converting a plasmid into a functional *piggyback* transposon, said method comprising:
 - (a) obtaining the cartridge of claim 9; and
 - (b) inserting said cartridge into the plasmid.
17. A method of converting a plasmid into a functional *piggyback* transposon, said method comprising:
 - (a) obtaining the cartridge of claim 10; and
 - (b) inserting said cartridge into the plasmid.
18. A DNA construct for transforming a cell, said construct comprising the DNA molecule of claim 1 and further comprising a DNA molecule to be transferred to the cell.
19. A DNA construct for transforming a cell, said construct comprising the DNA molecule of claim 2 and further comprising a DNA molecule to be transferred to the cell.